



Proceedings of the 4th Workshop on Representation Learning for NLP (RepL4NLP-2019)

Augenstein, Isabelle; Gella, Spandana; Ruder, Sebastian ; Kann, Katharina ; Can, Burcu; Conneau, Alexis; Welbl, Johannes; Ren, Xian ; Rei, Marek

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ACL 2019

**The 4th Workshop on Representation Learning for NLP
(RepL4NLP-2019)**

Proceedings of the Workshop

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Introduction

The 4th Workshop on Representation Learning for NLP (RepL4NLP) will be hosted by ACL 2019 and held on 2 August 2019. The workshop is being organised by Isabelle Augenstein, Spandana Gella, Sebastian Ruder, Katharina Kann, Burcu Can, Alexis Conneau, Johannes Welbl, Xian Ren and Marek Rei; and advised by Kyunghyun Cho, Edward Grefenstette, Karl Moritz Hermann, Chris Dyer and Laura Rimell. The workshop is organised by the ACL Special Interest Group on Representation Learning (SIGREP) and receives generous sponsorship from Facebook AI Research, Amazon, and Naver.

The 4th Workshop on Representation Learning for NLP aims to continue the success of the 1st Workshop on Representation Learning for NLP (about 50 submissions and over 250 attendees; second most attended collocated event at ACL'16 after WMT), 2nd Workshop on Representation Learning for NLP and 3rd Workshop on Representation Learning for NLP. The workshop was introduced as a synthesis of several years of independent *CL workshops focusing on vector space models of meaning, compositionality, and the application of deep neural networks and spectral methods to NLP. It provides a forum for discussing recent advances on these topics, as well as future research directions in linguistically motivated vector-based models in NLP.

Organizers:

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Spandana Gella, Amazon AI
Katharina Kann, New York University
Marek Rei, University of Cambridge
Xiang Ren, University of Southern California
Sebastian Ruder, DeepMind
Johannes Welbl, University College London

Senior Advisors:

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Chris Dyer, DeepMind
Edward Grefenstette, Facebook AI Research
Karl Moritz Hermann, DeepMind
Laura Rimell, DeepMind

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Ivan Vulić, University of Cambridge
Dirk Weissenborn, Google AI, Berlin
Yadollah Yaghoobzadeh, Microsoft Research Montreal
Yi Yang, ASAPP
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Wenpeng Yin, University of Pennsylvania
Luke Zettlemoyer, University of Washington
Wenxuan Zhou, University of Southern California
Diarmuid Ó Séaghdha, Apple
Robert Östling, Department of Linguistics, Stockholm University

Keynote Speakers:

Mohit Bansal, UNC Chapel Hill
Marco Baroni, Facebook AI Research
Raquel Fernandez, University of Amsterdam
Yulia Tsvetkov, Carnegie Mellon University

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Workshop Program

Friday, August 2, 2019

09:30–09:45 Welcome and Opening Remarks

09:45–14:45 Keynote Session

09:45–10:30 *Invited Talk 1*
Marco Baroni

10:30–11:00 Coffee Break

11:00–11:45 *Invited Talk 2*
Mohit Bansal

11:45–12:30 *Invited Talk 3*
Raquel Fernández

12:30–14:00 Lunch

14:00–14:45 *Invited Talk 4*
Yulia Tsvetkov

14:45–15:00 Outstanding Papers Spotlight Presentations

Friday, August 2, 2019 (continued)

15:00–16:30 Poster Session (including Coffee Break from 15:30-16:00) + Drinks Reception

Deep Generalized Canonical Correlation Analysis

Adrian Benton, Huda Khayrallah, Biman Gujral, Dee Ann Reisinger, Sheng Zhang and Raman Arora

CBOW Is Not All You Need: Combining CBOW with the Compositional Matrix Space Model

Florian Mai, Lukas Galke and Ansgar Scherp

To Tune or Not to Tune? Adapting Pretrained Representations to Diverse Tasks

Matthew E. Peters, Sebastian Ruder and Noah A. Smith

Generative Adversarial Networks for Text Using Word2vec Intermediaries

Akshay Budhkar, Krishnapriya Vishnubhotla, Safwan Hossain and Frank Rudzicz

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Constructive Type-Logical Supertagging With Self-Attention Networks

Konstantinos Kogkalidis, Michael Moortgat and Tejaswini Deoskar

Auto-Encoding Variational Neural Machine Translation

Bryan Eikema and Wilker Aziz

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Federica Calanca, Luiza Sayfullina, Lara Minkus, Claudia Wagner and Eric Malmi

Learning Bilingual Word Embeddings Using Lexical Definitions

Weijia Shi, Muhao Chen, Yingtao Tian and Kai-Wei Chang

An Empirical Study on Pre-trained Embeddings and Language Models for Bot Detection

Andres Garcia-Silva, Cristian Berrio and José Manuel Gómez-Pérez

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Vinit Ravishankar, Lilja Øvrelid and Erik Velldal

Fine-Grained Entity Typing in Hyperbolic Space

Federico López, Benjamin Heinzerling and Michael Strube

Semantic Cross-lingual Sentence Embeddings

Wataru Hirota, Yoshihiko Suhara, Behzad Golshan and Wang-Chiew Tan

Learning Multilingual Meta-Embeddings for Code-Switching Named Entity Recognition

Genta Indra Winata, Zhaojiang Lin and Pascale Fung

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Extended Abstract: An Auto-NLP Representation Learning Framework

Akshay Budhkar

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Best Practices for Learning Domain-Specific Cross-Lingual Embeddings

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Effective Dimensionality Reduction for Word Embeddings

Vikas Raunak, Vivek Gupta and Florian Metze

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Learning Word Embeddings without Context Vectors

Alexey Zobnin and Evgenia Elisratova

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A Study of State Aliasing in Structured Prediction with RNNs

Layla El Asri and Adam Trischler

Learning Cross-Lingual Sentence Representations via a Multi-task Dual-Encoder Model

Muthu Chidambaram, Yinfei Yang, Daniel Cer, Steve Yuan, Yunhsuan Sung, Brian Strope and Ray Kurzweil

Modality-based Factorization for Multimodal Fusion

Elham J. Barezi and Pascale Fung

Leveraging Pre-Trained Embeddings for Welsh Taggers

Ignatius Ezeani, Scott Piao, Steven Neale, Paul Rayson and Dawn Knight

16:30–17:30 Panel Discussion

17:30–17:40 Closing Remarks + Best Paper Awards Announcement

